

The EPA Administrator, Lisa P. Jackson, signed the following notice on 06/08/2011, and EPA is submitting it for publication in the *Federal Register* (FR). While we have taken steps to ensure the accuracy of this Internet version of the rule, it is not the official version of the rule for purposes of compliance. Please refer to the official version in a forthcoming FR publication, which will appear on the Government Printing Office's FDSys website (<http://fdsys.gpo.gov/fdsys/search/home.action>) and on Regulations.gov (<http://www.regulations.gov>) in Docket No. **EPA-HQ-OAR-2010-0295**. Once the official version of this document is published in the FR, this version will be removed from the Internet and replaced with a link to the official version.

6560-50-P

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Parts 60, 1039, 1042, 1065, 1068**

**[EPA-HQ-OAR-2010-0295, FRL-XXXX-Y ]**

**RIN 2060-AP67**

**Standards of Performance for Stationary Compression Ignition and  
Spark Ignition Internal Combustion Engines**

**AGENCY:** The Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** The EPA is finalizing revisions to the standards of performance for new stationary compression ignition internal combustion engines under section 111(b) of the Clean Air Act. The final rule requires more stringent standards for stationary compression ignition engines with displacement greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder, consistent with recent revisions to standards for similar mobile source marine engines. In addition, the action revises the requirements for engines with displacement at or

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above 30 liters per cylinder to align more closely with recent standards for similar mobile source marine engines, and for engines in remote portions of Alaska that are not accessible by the Federal Aid Highway System. The action also provides additional flexibility to owners and operators of affected engines, and corrects minor mistakes in the original standards of performance. Finally, the action makes minor revisions to the standards of performance for new stationary spark ignition internal combustion engines to correct minor errors and to mirror certain revisions finalized for compression ignition engines, which provides consistency where appropriate for the regulation of stationary internal combustion engines. The final standards will reduce nitrogen oxides by an estimated 1,100 tons per year, particulate matter by an estimated 38 tons per year, and hydrocarbons by an estimated 18 tons per year in the year 2030.

**DATES:** This final rule is effective on [INSERT DATE 60 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** The EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2010-0295. The EPA also relies on materials in Docket ID Nos. EPA-HQ-OAR-2005-0029 and EPA-HQ-OAR-2003-0190, and incorporates those dockets into the record for this final rule. All documents in the docket are listed on the

[www.regulations.gov](http://www.regulations.gov) web site. Although listed in the index, some information is not publicly available, e.g., Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through [www.regulations.gov](http://www.regulations.gov) or in hard copy at EPA Headquarters Library, Room Number 3334, EPA West Building, 1301 Constitution Ave., NW, Washington, DC. The EPA/DC Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m. Eastern Standard Time (EST), Monday through Friday. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air and Radiation Docket and Information Center is (202) 566-1742.

**FOR FURTHER INFORMATION CONTACT:** Ms. Melanie King, Energy Strategies Group, Sector Policies and Programs Division (D243-01), Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number (919) 541-2469; facsimile number (919) 541-5450; email address [king.melanie@epa.gov](mailto:king.melanie@epa.gov).

**SUPPLEMENTARY INFORMATION:** Background Information Document. On June 8, 2010 (75 FR 32612), the EPA proposed amendments to the standards of performance for stationary compression ignition and

spark ignition engines. A summary of the public comments on the proposal and the EPA's responses to the comments, as well as the Economic Impact and Small Business Analysis Report, are available in Docket ID No. EPA-HQ-OAR-2010-0295.

Organization of This Document. The following outline is provided to aid in locating information in the preamble.

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- K. Congressional Review Act

### I. General Information

#### A. Does this action apply to me?

Regulated Entities. Categories and entities potentially regulated by this action include:

Category	NAICS <sup>1</sup>	Examples of regulated entities
Any manufacturer that produces or any industry using a stationary internal combustion engine as defined in the final rule	2211	Electric power generation, transmission, or distribution
	622110	Medical and surgical hospitals
	335312	Motor and generator manufacturing
	33391	Pump and compressor manufacturing
	333992	Welding and soldering equipment manufacturing

<sup>1</sup> North American Industry Classification System.

This table is not intended to be exhaustive, but rather

provides a guide for readers regarding entities likely to be

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regulated by this action. To determine whether your engine is regulated by this action, you should examine the applicability criteria of this final rule. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

B. Where can I get a copy of this document?

In addition to being available in the docket, an electronic copy of this final action will also be available on the Worldwide Web (WWW) through the Technology Transfer Network (TTN). Following signature, a copy of this final action will be posted on the TTN's policy and guidance page for newly proposed or promulgated rules at the following address:

<http://www.epa.gov/ttn/oarpg/>. The TTN provides information and technology exchange in various areas of air pollution control.

C. Judicial Review

Under section 307(b)(1) of the Clean Air Act (CAA), judicial review of this final rule is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by [INSERT DATE 60 DAYS AFTER PUBLICATION IN FEDERAL REGISTER]. Under section 307(d)(7)(B) of the CAA, only an objection to this final rule that was raised with reasonable specificity during the period for public comment

can be raised during judicial review. Moreover, under section 307(b) (2) of the CAA, the requirements established by this final rule may not be challenged separately in any civil or criminal proceedings brought by the EPA to enforce these requirements.

Section 307(d) (7) (B) of the CAA further provides that "[o]nly an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review." This section also provides a mechanism for the EPA to convene a proceeding for reconsideration, "[i]f the person raising an objection can demonstrate to the EPA that it was impracticable to raise such objection within [the period for public comment] or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule." Any person seeking to make such a demonstration to us should submit a Petition for Reconsideration to the Office of the Administrator, U.S. EPA, Room 3000, Ariel Rios Building, 1200 Pennsylvania Ave., NW., Washington, DC 20460, with a copy to both the person(s) listed in the preceding **FOR FURTHER INFORMATION CONTACT** section, and the Associate General Counsel for the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), U.S. EPA, 1200 Pennsylvania

Ave., NW., Washington, DC 20460.

## **II. Background**

This action promulgates revisions to the new source performance standards (NSPS) for new compression ignition (CI) stationary internal combustion engines (ICE). The NSPS were originally promulgated on July 11, 2006 (71 FR 39153). New source performance standards implement section 111(b) of the CAA, and are issued for categories of sources which cause, or contribute significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare. The standards apply to new stationary sources of emissions, i.e., sources whose construction, reconstruction, or modification begins after a standard for those sources is proposed.

For the first time, the NSPS put federal restrictions on emissions of particulate matter (PM), oxides of nitrogen (NO<sub>x</sub>), non-methane hydrocarbons (NMHC) and carbon monoxide (CO) from new stationary CI engines. The NSPS also restricted the level of sulfur permitted in diesel fuel used in new stationary CI engines. The levels in the NSPS were generally based on standards promulgated in previous rules for similar nonroad (i.e., mobile off-highway) engines. For larger engines with displacement greater than or equal to 10 liters per cylinder (l/cyl) and less than 30 l/cyl, the levels were based on



standards for similar marine engines. For engines with displacement greater than or equal to 30 l/cyl, the standards were based on evidence collected for those specified engines.

Following promulgation of the initial NSPS, the EPA received several comments from interested parties regarding aspects of the final rule. In particular, the Engine Manufacturers Association (EMA) stated its belief that the standards promulgated for engines with displacement greater than or equal to 30 l/cyl were not feasible, especially for those engines located in areas without requirements for low sulfur diesel fuel. Engine manufacturers also noted some minor errors in the standards as published. The American Petroleum Institute (API) petitioned for review of the final NSPS, and stated to the EPA that, among other concerns, API believed that the compliance requirements did not allow owner and operators enough flexibility to use operation and maintenance procedures that were different from those recommended by manufacturers, yet would still provide good emission control practice for minimizing emissions. API also had other comments regarding the final rule, including concerns regarding use of the term "useful life" in the stationary engine context, and concerns that temporary portable engines would be treated as subject to NSPS requirements beyond the requirements for nonroad engines. These

amendments address the comments received from EMA and API.

Additionally, on June 30, 2008, the EPA published more stringent standards for new locomotives and for new CI marine vessels under 40 CFR parts 1033 and 1042, respectively, including marine vessel engines with displacement greater than or equal to 10 l/cyl and less than 30 l/cyl (73 FR 37095). The rule promulgated two new tiers of standards for newly manufactured marine CI engines at or above 600 kilowatt (KW) (800 horsepower (HP)), the second of which was based on the application of catalytic aftertreatment technology. Further, on April 30, 2010, the EPA promulgated final fuel requirements and standards regulating emissions from marine engines with displacement above 30 l/cyl (75 FR 22896). These requirements are equivalent to the limits adopted by the International Maritime Organization (IMO) in October 2008 as an amendment to Annex VI of the International Convention for the Prevention of Pollution from Ships (also called MARPOL Annex VI). The EPA is revising the NSPS for stationary CI engines with a displacement greater than or equal to 10 l/cyl to align them with the standards for similar marine engines.

Also, on October 31, 2008, the State of Alaska, pursuant to the provision in the final NSPS for CI engines allowing it to request alternative provisions for remote Alaska, requested that

the EPA make certain changes in its requirements to account for circumstances in remote Alaska that are different from those in the rest of the United States. These amendments revise the NSPS for stationary CI engines to address issues raised by the State of Alaska in its request.

On January 18, 2008, the EPA published a final rule containing separate standards of performance for stationary spark ignition (SI) engines (73 FR 3567). While these regulations are distinct from the standards of performance for CI engines, certain aspects of these regulations, particularly regarding compliance and definitions, are intended to be consistent with the regulations promulgated for CI engines. Therefore, the EPA is making minor revisions to the NSPS for stationary SI engines to maintain consistency with the NSPS for stationary CI engines. In addition, the EPA received comments indicating minor errors in the regulations for SI engines. While the EPA is not making any significant changes to the SI regulations in this rule, except for those to maintain consistency, the EPA is correcting certain minor errors in the NSPS for stationary SI engines in this rule.

### **III. Summary of the Final Amendments**

#### **A. Standards for New Engines With Displacement Greater Than or Equal to 10 l/cyl and Less Than 30 l/cyl**

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The EPA is incorporating the standards for new marine engines that were promulgated on June 30, 2008 (73 FR 37095), into the NSPS for new stationary CI ICE with displacement greater than or equal to 10 l/cyl and less than 30 l/cyl. The standards were found to be feasible for the marine engines covered by those requirements. As discussed in the original NSPS final rule, stationary engines in this displacement range are similar in design to marine CI engines and are generally certified to marine standards. The EPA is, therefore, basing the standards for non-emergency stationary CI ICE with a displacement between 10 l/cyl and 30 l/cyl on the technologies identified in the June 30, 2008, rulemaking that are expected to be used to meet the emission standards for marine CI engines.

The final standards would not take effect until 2013, at the earliest. The standards are summarized in Tables 1 and 2 in this preamble.

**Table 1 - First Tier Standards for Stationary CI Engines With a Displacement  $\geq 10$  and  $< 30$  Liters per Cylinder<sup>a</sup>**

Engine Displacement (Liters per Cylinder)	Maximum Engine Power	PM g/HP-hr (g/KW- hr)	NO <sub>x</sub> +HC g/HP-hr (g/KW- hr)	Model Year
10.0≤displacement<15.0	<2,000 KW	0.10 (0.14)	4.6 (6.2)	2013+
10.0≤displacement<15.0	2,000≤KW<3,700	0.10 (0.14)	5.8 (7.8)	2013+

Engine Displacement (Liters per Cylinder)	Maximum Engine Power	PM g/HP-hr (g/KW- hr)	NO <sub>x</sub> +HC g/HP-hr (g/KW- hr)	Model Year
15.0≤displacement<20.0	<2,000 KW	0.25 (0.34)	5.2 (7.0)	2014+
20.0≤displacement<25.0	<2,000 KW	0.20 (0.27)	7.3 (9.8)	2014+
25.0≤displacement<30.0	<2,000 KW	0.20 (0.27)	8.2 (11.0)	2014+

<sup>a</sup>See note (b) of Table 2 for optional standards.

**Table 2 - Second Tier Standards for Stationary CI Engines  
With a Displacement ≥10 and <30 Liters per Cylinder**

Engine Displacement (Liters per Cylinder)	Maximum Engine Power	PM g/HP-hr (g/KW- hr)	NO <sub>x</sub> g/HP- hr (g/KW- hr)	HC g/HP- hr (g/KW- hr)	Model Year
All	600≤KW<1,400	0.03 (0.04)	1.3 (1.8)	0.14 (0.19)	2017+ <sup>a</sup>
All	1,400≤KW<2,000	0.03 (0.04)	1.3 (1.8)	0.14 (0.19)	2016+ <sup>b</sup>
All	2,000≤KW<3,700	0.03 <sup>c</sup> (0.04)	1.3 (1.8)	0.14 (0.19)	2014+ <sup>b</sup>
<15.0	≥3,700 KW	0.09 (0.12)	1.3 (1.8)	0.14 (0.19)	2014- 2015 <sup>b</sup>
15.0≤displacement <30.0		0.19 (0.25)	1.3 (1.8)	0.14 (0.19)	2014- 2015 <sup>b</sup>
All		0.04 (0.06)	1.3 (1.8)	0.14 (0.19)	2016+ <sup>a</sup>

<sup>a</sup>Optional compliance start dates can be used within these model years; see 40 CFR 1042.101(a)(8).

<sup>b</sup>Option: 1<sup>st</sup> Tier PM / NO<sub>x</sub>+HC at 0.10/5.8 g/HP-hr (0.14/7.8 g/KW-hr) in 2012, and 2<sup>nd</sup> Tier in 2015.

<sup>c</sup>Interim Tier 4 PM standards for 2014 and 2015 model year engines with a displacement at or above 15 liters per cylinder are 0.25 g/HP-hr (0.34 g/KW-hr) for engines 2,000≤KW<3,300 and 0.20 g/HP-hr (0.27 g/KW-hr) for engines 3,300≤KW<3,700.

The first tier of standards is based on engine-based

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technologies already in use or expected to be used for other mobile and stationary engines (e.g., improved fuel injection, engine mapping, and calibration optimization), as well as the use of ultra low sulfur (i.e., 15 parts per million (ppm) sulfur) diesel (ULSD). The second tier of standards is expected to be met with the use of catalytic exhaust aftertreatment that has already been used for other similar mobile and stationary engines, like catalyzed diesel particulate filters (CDPF) and selective catalytic reduction (SCR).

B. Standards for Engines With Displacement Greater Than or Equal to 30 l/cyl

In the initial final NSPS, the EPA required owners and operators of stationary CI ICE with a displacement of greater than or equal to 30 l/cyl to reduce NO<sub>x</sub> emissions by 90 percent or more, or alternatively they had to limit the emissions of NO<sub>x</sub> in the stationary CI internal combustion engine exhaust to 1.6 grams per KW-hour (g/KW-hr) (1.2 grams per HP-hour (g/HP-hr)). Owners and operators were also required to reduce PM emissions by 60 percent or more, or alternatively they had to limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr). These standards were applicable in all areas, including areas in the Pacific (e.g., Guam) and remote areas of Alaska that were exempted, at least

temporarily, from using low sulfur fuel. The standards were also applicable to all engines in this displacement category, whether they were used for emergency or non-emergency purposes.

Following completion of the original rule, the EPA received comments from engine manufacturers stating that the standards would be infeasible in areas where low sulfur fuel was not used. The engine manufacturers recommended less stringent standards for areas where low sulfur fuel is not required. The EPA also received later comments indicating that the standards were also infeasible for engines in areas with access to lower sulfur fuel, and that the standards should instead be harmonized with the IMO standards for similar engines in marine vessels. These comments also requested that the EPA take the same approach to emergency engines with displacement greater than or equal to 30 l/cyl as the EPA takes for smaller emergency engines. For other emergency engines, the EPA promulgated emission standards that do not require the use of aftertreatment, given the limited use of the engines, the ineffectiveness of the aftertreatment during startup, and the need for safe, reliable and immediate operation of the engine during emergencies. The comments stated that engines of this size have been used as emergency generators at nuclear power plants in order to assure the safe shut-down of the reactor in case of emergency due to their excellent

performance and reliability.

Regarding the NO<sub>x</sub> standard for these engines, the EPA agrees that it is appropriate to adjust the stringency of the NO<sub>x</sub> standard to match the worldwide NO<sub>x</sub> standard approved in the IMO's Annex VI and promulgated by the EPA on April 30, 2010 (75 FR 22896), for marine engines with displacement at or above 30 l/cyl. While the technology required by the existing NSPS has been used on other stationary engines, the EPA realizes the need to provide lead time for the technology to transfer to the largest of engines. The final IMO NO<sub>x</sub> standard is comparable to the existing NSPS NO<sub>x</sub> standard, but provides more lead time for final implementation. Revising the standard to match the standard for marine engines allows manufacturers to design a single type of engine for both uses. This standard has been substantially reviewed by the EPA and other governments and has been found to be feasible in the time provided. For engines installed prior to January 1, 2012, the standard is 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 revolutions per minute (rpm);  $45 \cdot n^{-0.2}$  g/KW-hr ( $34 \cdot n^{-0.2}$  g/HP-hr) when n (maximum engine speed) is 130 or more, but less than 2,000 rpm; 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more. For engines installed after January 1, 2012, the EPA is finalizing a more stringent standard of 14.4



g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;  $44 \cdot n^{-0.23}$  g/KW-hr ( $33 \cdot n^{-0.23}$  g/HP-hr) where n (maximum engine speed) is 130 or more but less than 2,000 rpm; and 7.7 g/KW-hr (5.7 g/HP-hr) where maximum engine speed is greater than or equal to 2,000 rpm. For engines installed after January 1, 2016, the EPA is finalizing a more stringent standard that presumes the use of aftertreatment. The levels are 3.4 g/KW-hr (2.5 g/HP-hr) when maximum engine speed is less than 130 rpm;  $9.0 \cdot n^{-0.20}$  g/KW-hr ( $6.7 \cdot n^{-0.20}$  g/HP-hr) where n (maximum engine speed) is 130 or more but less than 2,000 rpm; and 2.0 g/KW-hr (1.5 g/HP-hr) where maximum engine speed is greater than or equal to 2,000 rpm.

For engines installed in Pacific island areas that are not required to use lower sulfur fuel, while the EPA believes that SCR can be installed on such engines even where high sulfur fuel is being used, the EPA agrees that the use of high sulfur fuel, and the presence of other impurities in this type of fuel (i.e., heavy fuel oil), as well as different density and viscosity, make it difficult to achieve similar results from SCR as would occur with lower sulfur fuel. Maintenance of high NO<sub>x</sub> reduction levels is also more difficult when using high sulfur fuel. The use of higher sulfur heavy fuel oil also increases engine-out NO<sub>x</sub> emissions because of the increased levels of contaminants in the

fuel. The EPA also notes that the areas in question do not have any significant ozone problem. The EPA, therefore, is not requiring the more stringent standards that would otherwise apply beginning in 2016 in these areas.

Similarly, the EPA is not requiring the more stringent, aftertreatment-forcing NO<sub>x</sub> standards for emergency engines with displacement at or above 30 l/cyl. As the commenters noted, the EPA did not require aftertreatment-forcing requirements for other emergency engines due to the limited use of the engines, the ineffectiveness of the aftertreatment during startup, and the need for safe, reliable and immediate operation of the engine during emergencies. The EPA agrees that similar concerns are present for emergency engines in this power category.

The EPA is also modifying its fuel requirements for engines with displacement at or above 30 l/cyl. The final rule promulgated by the EPA for marine engines with displacement above 30 l/cyl required those engines to use fuel meeting a 1,000 ppm sulfur level beginning in 2014, and also made other revisions to the mobile source fuel requirements that will likely have the effect of making 1,000 ppm sulfur fuel the outlet for diesel fuel that does not meet the 15 ppm sulfur standard generally required for mobile source fuel. The EPA is revising the fuel sulfur standards for stationary CI engines

with displacement at or above 30 l/cyl to a 1,000 ppm sulfur level beginning on June 1, 2012.

The EPA agrees that the numerical standards for PM promulgated in the original final rule would be very difficult, if not impossible, to achieve using high sulfur fuel. The EPA therefore agrees that it is appropriate to revise the concentration limit for PM for stationary CI ICE with a displacement of greater than or equal to 30 l/cyl in areas where low sulfur fuel is not required. The EPA is finalizing a standard of 0.40 g/KW-hr (0.30 g/HP-hr). Given the substantial health concerns associated with diesel PM emissions, the EPA believes it is appropriate to require this level for all engines where low sulfur fuel is not required. Similarly, the EPA is revising the PM standard for emergency engines to 0.40 g/kW-hr (0.30 g/HP-hr), for the reasons provided above regarding NO<sub>x</sub> standards for such engines.

The EPA is not changing the PM standard for non-emergency engines in areas where the lower sulfur fuel is available. As the EPA explained in the original NSPS, the EPA believes this standard is achievable for engines using existing technology and low sulfur fuel. The substantial health risks associated with diesel PM require that these stringent standards remain in place.

### C. Compliance Requirements for Owners and Operators

In the original final NSPS for stationary CI ICE, the EPA required all engines to be installed, configured, operated, and maintained according to the specifications and instructions provided by the engine manufacturer. The EPA also allowed the option for owners and operators to follow procedures developed by the owner or operator that have been approved by the engine manufacturer for cases where site-specific conditions may require changes to the manufacturer's typical guidelines.

Several parties objected to this requirement. According to the parties, this requirement restricts owners and operators from using the most appropriate methods for installing, operating and maintaining engines in the field. The parties claim that owners and operators are in the best position to determine the most appropriate method of installing, operating and maintaining engines in the field and have more experience in doing so than engine manufacturers, and that operation and maintenance provisions in manufacturer manuals are often too stringent and inflexible to be required in binding regulations.

Based on the comments and information received during and after the rulemakings for NSPS for both CI and SI ICE, the EPA believes in this circumstance and with certain safeguards, it is appropriate to provide flexibility to owners and operators to

follow alternative operation and maintenance procedures.

Therefore, the EPA is revising the regulations to allow owners and operators to develop their own operation and maintenance plans as an alternative to following manufacturer operation and maintenance procedures. However, if an owner/operator decides to take this approach, the EPA will need greater assurance that the engine is meeting emission requirements because the owner/operator will not be operating according to the operation and maintenance instructions included in the engine manufacturer's certification. Thus, owner/operators using this approach will generally be subject to further testing of their engines and will be required to keep maintenance plans and records. Engines greater than 500 HP are required to conduct a performance test within 1 year of startup (or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions) to demonstrate compliance with the emission standards, and also have to conduct subsequent performance testing every 8,760 hours or 3 years (whichever comes first) thereafter. These engines are also required to keep a maintenance plan and records of conducted maintenance.

Engines greater than or equal to 100 HP and less than or

equal to 500 HP are required to conduct a performance test within 1 year of startup (or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions) to demonstrate compliance with the emission standards and in addition are required to keep a maintenance plan and records of conducted maintenance. Engines below 100 HP operating in a non-certified manner do not have to conduct further performance testing, but are required to keep a maintenance plan and records, and if the owner/operator does not install and configure the engine and control device according to the manufacturer's emission-related written instructions, then the owner/operator must conduct a performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.

Owners and operators have the ability to adjust engine settings outside of manufacturer settings as long as they demonstrate the engines comply with the standards at those settings with a performance test. Parties also noted that the operation and maintenance requirements extended beyond emission-related operation and maintenance and extended to operation and maintenance of all aspects of the engine, which the parties believed should be beyond the scope of the regulation. The EPA

agrees that the operation and maintenance requirements of the NSPS should be restricted to emission-related operation and maintenance, and is revising the regulations accordingly.

The EPA notes that if the engine settings are adjusted outside of the manufacturer's specifications, the engine is no longer considered to be a certified engine. The engine manufacturer is no longer considered responsible for the engine being in compliance with the applicable emission standards, and the emissions warranty for the engine becomes void.

#### D. Temporary Replacement Engines

The EPA received comments during and after the initial CI NSPS rulemaking and during the SI NSPS rulemaking indicating that there was some confusion regarding the status of temporary engines (i.e., generally engines in one location for less than 1 year) under the EPA's regulations. Further, there was concern that for those temporary engines that were considered stationary under the definitions of stationary and nonroad engine, because they replaced other stationary engines during periods when the main engines were off-line (e.g., for maintenance work), owners and operators of major sources would have little or no ability to oversee the operations of these temporary engines, as they were generally owned and maintained by other entities.

The EPA notes that except for certain instances (e.g.,

engines at seasonal sources or engines that replace stationary engines at a location), engines in one location for less than 1 year are generally considered to be mobile nonroad engines under the EPA's regulatory definitions of nonroad engine and stationary engine, and, therefore, the NSPS and other regulations applicable to stationary engines are not applicable to such engines. Examples of such nonroad engines are engines that are brought to a stationary major source for less than 1 year for purposes of general maintenance or construction.

Portable engines that replace existing stationary engines at the same location on a temporary basis and that are intended to perform the same or similar functions are considered stationary engines. This provision allows the permitting authority to count the emissions of the temporary unit in the emissions from the stationary source, as it would for the permanent unit. This prevents sources from avoiding the counting of such units in its projected or actual emissions. The EPA agrees with comments that with regard to temporary replacement engines, which are generally portable and moved from place to place, it is most appropriate that these engines, though considered stationary, should be allowed under the NSPS to meet requirements for mobile nonroad engines. These sources are not under the long-term control (or in many cases the short-term



control) of the local source, and, therefore, it is appropriate to hold them to the requirements for similar sources that are mobile in character. The EPA also notes that under the pre-existing general provisions for 40 CFR part 60, the fact that an engine moves from place to place does not, by the sole basis of that movement, make the engine a "new" engine for the purposes of the NSPS.

#### E. Requirements for Engines Located in Remote Areas of Alaska

In the original final NSPS, the EPA agreed to delay the sulfur requirements for diesel fuel intended for stationary ICE in remote areas of Alaska not accessible by the Federal Aid Highway System (FAHS) ("remote Alaska") until December 1, 2010, except that any 2011 model year and later stationary CI engines operating in remote Alaska prior to December 1, 2010, would be required to meet the 15 ppm sulfur requirement for diesel fuel. This approach was consistent with the approach that was used for nonroad and highway engines in remote Alaska. The EPA also included a special section in the final rule that specified that until December 1, 2010, owners and operators of stationary CI engines located in Alaska should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.

In addition, the original final regulations included

language that allowed Alaska to submit for the EPA approval through rulemaking process an alternative plan for implementing the requirements of this regulation for public-sector electrical utilities located in remote areas of Alaska not accessible by the FAHS. The alternative plan needed to be based on the requirements of section 111 of the CAA including any increased risks to human health and the environment, and also needed to be based on the unique circumstances related to remote power generation, climatic conditions, and serious economic impacts resulting from implementation of the final NSPS.

The EPA also included an option in the original final NSPS for stationary CI engines that allowed owners and operators of pre-2011 model year engines located in remote areas of Alaska to petition the Administrator to use any fuels mixed with used oil that do not meet the fuel requirements in §60.4207 of the final rule beyond the required fuel deadlines. The owner or operator was required to show that there is no other place to burn the used oil. Each petition, if approved, was valid for a period of up to 6 months.

The EPA communicated with officials from the State of Alaska on several occasions following the promulgation of the final rule, and gave the State of Alaska an extension from the original deadline of January 11, 2008, to provide its

alternative plan for remote Alaska to the EPA. On October 31, 2008, the EPA received Alaska's request for several revisions to the NSPS as it pertains to engines located in the remote part of Alaska not served by the FAHS.

In particular, the State of Alaska requested the following:

- Allow NSPS owner/operator requirements to apply only to model year 2011 and later engines.
- Maintain a December 1, 2010, deadline for transition of regulated engines to ULSD.
- Authorize continued use of single circuit jacketwater marine diesel engines for prime power applications.
- Remove limitations on using fuels mixed with used lubricating oil that do not meet the fuel requirements of 40 CFR part 60, subpart IIII.
- Review emission control design requirements needed to meet new NSPS emission standards, including the possibility of removing or delaying emissions standards requiring advanced exhaust gas emissions aftertreatment technologies until the technology is proven for remote and arctic applications.

The EPA notes the following information provided by the State of Alaska in its request. In general, the State noted that over 180 remote communities in Alaska that are not accessible by

the FAHS rely on diesel engines and fuel for electricity. These communities are scattered over long distances in remote areas and are not connected to population centers by road or power grid. These communities are located in the most severe arctic environments in the United States.

Regarding the request that owners and operator requirements apply only to model year 2011 and later engines, the State of Alaska focused on two particular requirements for pre-2011 engines: the requirement that pre-2011 engines that are manufactured after April 1, 2006, use ULSD beginning on December 1, 2010; and the requirement that after December 31, 2008, owners and operators may not install engines that do not meet the applicable requirements for 2007 model year engines.

The State of Alaska noted that Alaska village power plants are typically operated by a single part-time operator with an alternate, that there is a high rate of turnover among plant operators, and that operators have limited training, expertise or resources. The State of Alaska notes that pre-2011 engines will all be fueled, prior to December 1, 2011, with the same fuel. The State of Alaska stated that it would greatly simplify operations to coordinate the fuel requirements with the introduction of 2011 model year engines, rather than retroactively requiring some, but not all, earlier engines to

meet the fuel requirements. It would also facilitate the smoother transition to ULSD fuel, rather than requiring numerous engines to all meet the requirements at the same time. The State of Alaska noted that there is no technological requirement for pre-model year 2011 engines to use aftertreatment, and thus no technological need to use ULSD. The EPA agrees that the requested revision will reduce the complexity of the regulations and that ULSD is not technologically necessary for engines that are not required to meet the Tier 4 emission standards for PM. As discussed in section V.C., in response to comments during this rulemaking requesting relief from the requirement to meet Tier 4-equivalent PM standards, the EPA is requiring new engines in remote areas of Alaska to meet the more stringent PM standards and use ULSD beginning with 2014 model year engines. Therefore, the EPA is finalizing a requirement that 2014 model year and later engines use ULSD, rather than 2011 model year and later that was proposed. The EPA also notes that the requirement to use ULSD for 2014 and later model year engines will eventually lead to a complete turnover of the fuel used in the remote villages.

The State of Alaska notes that the planning, construction and operation of engines in remote Alaska is complex. The timeframe for these projects, which are coordinated among

several governmental entities, typically exceeds 3 years. The State of Alaska notes that several projects that were designed and funded based on pre-2007 model year engines were not installed prior to December 31, 2008. Therefore, the State of Alaska requested that the deadline be moved to December 2010. While the EPA understands that some extra time may be needed to allow for these pre-existing projects to go forward with pre-2007 engines, the EPA does not believe the State of Alaska has justified a 2-year extension, beyond the 2 years already provided in the regulations. However, the EPA believes that a 1-year extension would be appropriate. The EPA is, therefore, finalizing a 1-year extension for owners and operators in remote Alaska to install pre-2007 model year engines.

Regarding its request for continued use of single circuit jacketwater marine diesel engines for prime power applications, the State of Alaska notes that remote villages in Alaska use combined heat and power cogeneration plants, which are vital to their economy, given the high cost of fuel and the substantial need for heat in that climate. Heat recovery systems are used with diesel engines in remote communities to provide heat to community facilities and schools. Marine-jacketed diesel engines are used wherever possible because of their superior heat recovery and thermal efficiency. The State of Alaska has noticed

great reductions in heat recovery when using Tier 3 non-marine engines. The State notes that reductions in fuel efficiency will lead to greater fuel use and greater emissions from burning extra heating oil. The EPA agrees with the State that there are significant benefits from using marine engines, and is finalizing a revision that will allow engines in remote Alaska to use marine-certified engines. However, as the State of Alaska notes, marine-certified engines, particularly those below 800 HP, are not required to meet more stringent requirements for reduction of PM emissions, which is the most significant pollutant of concern in these areas. Therefore, the EPA is requiring that owners and operators of 2014 model year and later engines must either be certified to Tier 4 standards (whether land-based nonroad or marine) or must install PM reduction technologies on their engines to achieve at least 85 percent reduction in PM.

Regarding the issue of using aftertreatment technologies that the State of Alaska says have not been tested in remote arctic climates, the EPA notes that the original request from the State of Alaska was particularly concerned with NO<sub>x</sub> standards that would likely entail the use of SCR in remote Alaska. NO<sub>x</sub> reductions are particularly important in areas where ozone is a concern, because NO<sub>x</sub> is a precursor to ozone. However, the State

of Alaska, and remote Alaska in particular, does not have any significant ozone problems. Moreover, the use of SCR entails the supply, storage and use of a chemical reductant, usually urea, that needs to be used properly in order to achieve the expected emissions reductions, and that may have additional operational problems in remote arctic climates. As noted above, these villages are not accessible by the FAHS and are scattered over long distances in remote areas and are not connected to population centers by road or power grid. The villages are located in the most severe arctic environments in the United States and they rely on stationary diesel engines and fuel for electricity and heating, and these engines need to be in working condition, particularly in the winter. While the availability of reductant is not a problem in the areas on the highway system, its availability in remote villages, particularly in the early years of the Tier 4 program, may be an issue, which is notable given the importance of the stationary engines in these villages. Furthermore, the costs for the acquisition, storage and handling of the chemical reductant would be greater than for engines located elsewhere in the United States due to the remote location and severe arctic climate of the villages. In order to maintain proper availability of the chemical reductant during the harsh winter months, new heated storage vessels may be



needed at each engine facility, further increasing the compliance costs for these remote villages. Given the issues that would need to be addressed if SCR were required, and the associated costs of this technology when analyzed under NSPS guidelines, the EPA understands the State of Alaska's argument that it is inappropriate to require such standards for stationary engines in remote Alaska.<sup>1</sup> Therefore, the EPA is not requiring owners and operators of new stationary engines to meet the Tier 4 standards for NO<sub>x</sub> in these areas. However, owners and operators of model year 2014 and later engines that do not meet the Tier 4 PM standards would be required to use PM aftertreatment, as discussed above. The use of PM aftertreatment will also achieve reductions in CO and hydrocarbons (HC).

Finally, regarding allowing owners and operators to blend up to 1.75 percent used oil into the fuel system, the State notes that there are no permitted used oil disposal facilities in remote Alaskan communities. The State has developed a cost-effective and reliable used-oil blending system that is currently being used in many remote Alaskan communities, disposing of the oil in an environmentally beneficial manner and

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<sup>1</sup> Note that this action applies to stationary engines only; it is unlikely that such an approach would be appropriate for mobile engines, given that they are less permanent in a village and can move in and out of areas as work requires, and because the EPA has less ability to enforce such an approach for mobile sources, where the EPA does not regulate the owner or operator directly.

capturing the energy content of the used oil. The absence of allowable blending would necessitate the shipping out of the used oil and would risk improper disposal and storage, as well as spills.

According to the State, blending waste oil at 1.75 percent or less will keep the fuel within American Society for Testing and Materials (ASTM) specifications if the sulfur content of the waste oil is below 200 ppm. The State acknowledges the need for engines equipped with aftertreatment devices to use fuel meeting the sulfur requirements. The EPA agrees that the limited blending of used oil into the diesel fuel used by stationary engines in remote Alaska is an environmentally beneficial manner of disposing of such oil and is of little to no concern when kept within appropriate limits. Therefore, the EPA is finalizing amendments that permit the blending of fuel oil at such levels for engines in remote Alaska. The used oil must be "on-spec," i.e., it must meet the on-specification levels and properties in 40 CFR 279.11.

The EPA agrees that the circumstances in remote Alaska require special rules. The EPA is, therefore, promulgating several amendments for engines used in remote Alaska:

- exempting all pre-2014 model year engines from diesel fuel sulfur requirements;

- allowing owners and operators of stationary CI engines located in remote areas of Alaska to use engines certified to marine engine standards, rather than land-based nonroad engine standards; and

- removing requirements to use aftertreatment devices for NO<sub>x</sub>, in particular, SCR, for engines used in remote Alaska;

- removing requirements to use aftertreatment devices for PM until the 2014 model year; and

- allowing the blending of used lubricating oil, in volumes of up to 1.75 percent of the total fuel, if the sulfur content of the used lubricating oil is less than 200 ppm and the used lubricating oil is "on-spec," i.e., it meets the on-specification levels and properties of 40 CFR 279.11.

#### F. Reconstruction

The EPA is also finalizing amendments to the NSPS that require reconstructed engines to meet the emission standards for the model year in which the reconstruction occurs if the reconstructed engine meets either of the following criteria:

- the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable new engine; or
- the reconstructed engine consists of a previously used engine block with all new components.

The final rule also clarifies that the provisions for modified and reconstructed engines apply to anyone who modifies or reconstructs an engine, including engine owners/operators, engine manufacturers, and anyone else. The final rule also adds additional clarification regarding what standards are applicable for modified or reconstructed engines.

#### G. Minor Corrections and Revisions

The EPA is making several minor revisions in this rule to correct mistakes in the initial rule or to clarify the rule. The revisions are listed below:

- Replacing the term “useful life” with “certified emissions life,” for purposes of clarity;
- Revising Table 3 in the in 40 CFR part 60, subpart IIII to account for a mistake in how Table 3 characterized the certification requirements for high speed fire pump engines in the original final rule;
- Revising the definition of “emergency stationary internal combustion engine” in the NSPS for stationary CI ICE to include the allowance for 50 hours of non-emergency operation, to be consistent with the definition of emergency stationary internal combustion engine in the NSPS for stationary SI ICE and the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary

Reciprocating Internal Combustion Engines (RICE) (40 CFR part 63, subpart ZZZZ);

- Revising the requirement for emergency engines to install non-resettable hour meters such that emergency engines that meet the requirements for non-emergency engines do not have to install the hour meters;
- Revising the applicability provisions to make clearer the EPA's requirement that all owners and operators of new sources must meet the deadlines for installation of compliant stationary engines;
- Revising certain provisions of the NSPS for stationary SI engines, particularly concerning definitions and compliance by owners and operators of such engines, to correct clear errors and to ensure consistency where appropriate for the regulation of stationary ICE; and
- Adding a definition of "installed" to provide clarity to the provisions regarding installing engines produced in previous model years.

#### **IV. Summary of Significant Changes Since Proposal**

##### **A. Definitions**

The EPA proposed to add a definition for "reconstruct" that was specific for the NSPS for stationary ICE. In the final rule, the EPA is not including the proposed definition for

reconstruct, and, instead, will continue to use the definition for reconstruction found in the General Provisions of 40 CFR part 60, specifically at 60.15 of that part. The EPA also proposed to add a definition for "date of manufacture" that would have assigned a new date of manufacture for reconstructed engines if any of the following criteria were met: the crankshaft was removed as part of the reconstruction; the fixed capital cost of the new and refurbished components exceeded 75 percent of the fixed capital cost for a comparable new engine; the engine serial number was removed; or the engine was produced using all new components except for the engine block. The definition for "date of manufacture" that the EPA is finalizing specifies that a new date of manufacture is assigned for a reconstructed engine if the fixed capital cost of the new and refurbished components exceeded 75 percent of the fixed capital cost for a comparable entirely new facility, or if the engine was produced using all new components except for the engine block.

The definition for "installed" that the EPA is finalizing is also different from the proposed definition. The definition that the EPA proposed stated that an engine is considered installed when it is placed and secured at the location where it is intended to be operated; piping and wiring for exhaust, fuel,

controls, etc. are installed and all connections are made; and the engine is capable of being started. The definition for "installed" in the final rule does not include the conditions that the piping and wiring are installed and the engine is capable of being started.

The EPA is also correcting a typographical error in the definition for "liquefied petroleum gas" in the NSPS for stationary SI ICE, 40 CFR part 60, subpart JJJJ. The definition should have the word "or" instead of the word "of" after the phrase ". . . obtained as a by-product in petroleum refining . . . ." This final rule corrects that typographical error.

#### B. Emission Standards and Fuel Requirements

In the final rule, the EPA is revising the fuel requirements for engines subject to the NSPS for stationary CI ICE. The rule as originally promulgated required owners and operators of stationary CI ICE to use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel beginning on October 1, 2010. Facilities could petition for approval to use existing inventories of non-compliant fuel for a period of up to 6 months at a time. Facilities were required to submit a new petition if additional time was needed. The EPA received a number of petitions for extensions of the October 1, 2010, deadline from facilities that operate emergency engines

that are subject to the NSPS for stationary CI ICE. In the petitions, the facilities indicated that they only operate the engines for a few hours each year, and that it may take a period of years to use up the existing fuel in their tanks, since they keep a supply of fuel on hand that would be adequate for the engines in the event of an emergency. Petitioners also noted the great expense of draining the remaining fuel and purchasing replacement fuel, while the drained fuel would likely be used in other applications that did not need to meet the fuel requirements of the NSPS. A petitioner requested that the EPA change the rule so that facilities were required to purchase diesel fuel that was compliant with 40 CFR 80.510(b) after October 1, 2010, but could use any fuel remaining in its tanks until it was depleted. Based on the information provided in the petitions, the EPA is revising the fuel requirement for stationary CI ICE subject to the NSPS. The final rule amends the requirement to specify that owners and operators must purchase fuel that meets the requirements of 40 CFR 80.510(b) beginning on October 1, 2010.

The EPA is also finalizing a different deadline than proposed for engines with a displacement greater than or equal to 30 l/cyl to transition to fuel with a sulfur content of 1,000 ppm. The EPA proposed to allow owners and operators of these



engines to begin using 1,000 ppm sulfur content fuel beginning on January 1, 2014. The final rule allows owners and operators to begin using 1,000 ppm sulfur content fuel beginning June 1, 2012.

Finally, the EPA is finalizing a different deadline for new engines in remote areas of Alaska to begin using ULSD than was proposed. The EPA proposed to require the use of ULSD beginning with 2011 model year engines; the final rule requires the use of ULSD beginning with 2014 model year engines. The EPA is also providing additional time before requiring stationary engines located in remote areas of Alaska to meet more stringent PM standards that are based on the use of aftertreatment.

### C. Requirements for Emergency Engines

The EPA proposed to amend the definition for "emergency stationary internal combustion engine" and the allowances for maintenance/testing and non-emergency operation for such engines to be consistent with the provisions promulgated in the NESHAP for existing stationary RICE at 40 CFR part 63, subpart ZZZZ. The EPA is only finalizing a portion of the proposed revisions to the emergency engine definition. The EPA is finalizing the provision allowing 50 hours of non-emergency service for stationary CI engines subject to the NSPS, in order to make the emergency engine provisions for new CI engines consistent with

those for new SI engines and existing CI and SI engines. At this time, the EPA is not finalizing the proposed provision allowing 15 hours for demand response operation for emergency stationary engines. The EPA included a similar provision for emergency engines in the March 3, 2010, amendments to the stationary RICE NESHAP (75 FR 9648), and subsequently proposed to amend the stationary engine NSPS to be consistent with the stationary RICE NESHAP. The EPA received two petitions for reconsideration of the 15-hour allowance for demand response in the stationary RICE NESHAP, and is currently reconsidering its decision to allow emergency engines to operate for 15 hours per year as part of an emergency demand response program. The EPA is deferring taking final action on including this provision in the stationary ICE NSPS pending the resolution of the reconsideration process on the stationary RICE NESHAP. The EPA will address this issue as it affects the CI and SI engine NSPS emergency engine provisions as part of that reconsideration process.

#### D. Other

In the proposed rule, the EPA requested comment on the need for stationary engines in marine offshore settings to use engines meeting the marine engine standards, rather than land-based engine standards. The comments that were received in response to the EPA's request all supported allowing stationary

engines in marine offshore settings to use engines meeting the marine engine standards. In the final rule, the EPA is including provisions that would allow stationary engines used in marine offshore settings to meet marine engine standards.

The EPA received comments on the proposed amendments requesting several changes to 40 CFR part 60, subpart JJJJ that were not related to this rule. While the EPA is generally not making these changes, as they are beyond the scope of this rule and would require substantive analysis, the EPA is making certain revisions to correct clear errors (e.g., changing > signs to < signs where appropriate) and clarifying that determining the exhaust flowrate is not required if the engine is being tested to show compliance with the concentration-based (ppm) standards for NO<sub>x</sub>, CO, and VOC.

## **V. Summary of Responses to Major Comments**

### **A. Fuel Requirements for Engines with a Displacement Greater Than or Equal to 30 L/Cyl**

Comment: One commenter supported a fuel limit of 1,000 ppm sulfur content for engines with a displacement at or above 30 l/cyl. The commenter agreed that it is appropriate to align fuel requirements for stationary engines with a displacement at or above 30 l/cyl with those that are in the IMO marine engine standards, since the stationary engine emission standards are

also being aligned with IMO marine engine standards. However, the commenter asked that the EPA require that this limit become effective immediately and not in 2014, as proposed. The commenter claimed that 500 ppm sulfur fuel, which is the sulfur level stationary engines at or above 30 l/cyl currently must meet for the fuel they use, will become very limited and perhaps unavailable after the 15 ppm sulfur fuel requirements take effect in October 2010 for most mobile and stationary engines. Engines of large displacement are not designed to operate on 15 ppm sulfur fuel, the commenter argued, therefore, appropriate fuel for these engines may not be available, or if it is, will be significantly more costly. To ensure the availability of appropriate fuel, the commenter asked that the EPA allow engines with a displacement at or above 30 l/cyl to use 1,000 ppm sulfur fuel immediately.

Response: The EPA agrees that it would be appropriate to require that stationary engines with a displacement of 30 l/cyl or more limit the sulfur content in the fuel to 1,000 ppm beginning earlier than 2014, which is the timeframe that was proposed. However, the EPA disagrees with the commenter's logic and that the requirement should become effective immediately. Diesel fuel containing 500 ppm sulfur will be the designated off-spec fuel within the diesel stream until 2014 and should be

available at least for locomotives and marine engines until June 1, 2012. Therefore, the EPA believes it is appropriate to finalize the 1,000 ppm fuel requirement for large displacement engines, but require that these engines begin using this fuel on June 1, 2012.

B. Operating and Maintenance Requirements

Comment: One commenter expressed concern about the proposal that for certified engines, owners and operators would be allowed to develop and follow their own operation and maintenance (O&M) procedures as an alternative to following the manufacturer's O&M procedures. The commenter recommended that engines that do not follow the manufacturer's O&M procedures be considered as operating in a non-certified manner and subject to initial performance testing requirements. The commenter indicated that it is supportive of providing additional flexibility, but that in those cases where an owner or operator opts to take an alternative O&M approach, which differs from what the manufacturer recommends for the engine, the engine manufacturer or certificate holder should no longer be responsible for emissions compliance. According to the commenter, the EPA should make that clarification as to who is responsible for the emissions from the engine and if operated differently than recommended by the manufacturer, the engine

should no longer be classified as a certified engine.

Response: The EPA agrees that the engine manufacturer should not be held responsible once owners and operators of a certified engine no longer operate and maintain the engine and control device according to the manufacturer's O&M procedures. This is consistent with the language in section 207 of the CAA and 40 CFR 1068.505, regarding mobile source engines, that specifies the EPA not require a recall of engines by the manufacturer unless the EPA determines that a substantial number of engines, although properly maintained and used, do not conform to emission regulations. The EPA thinks that it is clear in the rule language that the owner/operator, not the manufacturer, is required to show compliance in such situations, as was specifically laid out in 60.4211(g) of the proposed rule. Further, the EPA stated in the preamble to the proposed rule that engines operated in this manner would be considered non-certified engines and generally subject to performance testing (see 75 FR 32615, middle column).

#### C. Engines Located in Remote Alaska

Comment: One commenter supported allowing used oil blending under the CI NSPS. Blending used oil for burning in the facility's own engine is important and decreases risks related to disposal and spills in areas that have limited resources

available to deal with such costs, the commenter said. According to the commenter, a significant environmental concern in remote Alaska is the improper disposal of used oil. In most remote Alaska communities, there are no permitted used oil disposal facilities and the cost of exporting used oil is burdensome and can be the same price or more than purchasing new oil, the commenter noted. The commenter recommended that used fuel blending be allowed in the rule at a maximum blend level of 1.75 percent.

Response: The EPA agrees that the limited blending of used oil into the diesel fuel used by stationary engines in remote areas of Alaska is an environmentally beneficial manner of disposing of such oil. Therefore, the EPA has included a provision in the final rule that allows the blending of fuel oil for engines in remote Alaska, in volumes of up to 1.75 percent of the total fuel. The sulfur content of the used lubricating oil must be less than 200 ppm, and the used lubricating oil must be is "on-spec," i.e., it must meet the on-specification levels and properties in 40 CFR 279.11.

Comment: One commenter expressed concern over the proposed requirements for small remote power plants in Alaska that would necessitate aftertreatment in order to meet the PM limits. The commenter's concern regarding aftertreatment for PM is based on

the majority of small remote power plans being un-staffed and the technical capability of staff being minimal and including only basic maintenance tasks such as maintaining the oil, filter, belts and hoses. In addition, the commenter was concerned that the exhaust aftertreatment used to reduce PM would limit the ability to burn used oil in the engine, and could also pose a risk to the reliability of the engine. The commenter also believed that the installation and maintenance costs for PM aftertreatment were unreasonable.

Response: The EPA disagrees with the commenter that PM limits that necessitate the use of aftertreatment like CDPF should not be required at all for stationary CI engines located in remote areas of Alaska. The need for PM control was in the commenter's original request to the EPA, noting that PM is the most significant pollutant of concern in remote areas of Alaska. Stationary CI engines are often in very close proximity to the towns and the diesel PM emissions, which are highly toxic, can fall on the towns. Substantial health impacts are associated with diesel PM emissions and the EPA does not believe it is appropriate to reduce the stringency of PM requirements in remote Alaska.

Regarding the concerns raised by the State of Alaska regarding the feasibility and cost of installing and operating



CDPF in remote villages, the EPA is providing additional time in the final rule before new stationary engines in remote areas of Alaska are required to meet PM standards that would require CDPF. The use of CDPF for new nonroad and stationary diesel engines in the United States will be phased in from 2011 to 2015. Waiting until there is more widespread experience with operating and maintaining CDPF would allow time for Alaska's concerns regarding the feasibility of maintaining CDPF on engines in remote areas to be addressed. The type of engines most often used to power the remote villages is currently required by the NSPS to meet PM standards based on the use of CDPF beginning with the 2011 or 2012 model year, depending on the engine size. Providing a delay until the 2014 model year for engines located in remote Alaskan villages would provide State with 2 to 3 years to gain experience with the operation of the controls and develop the equipment infrastructure needed to properly operate and maintain the CDPF. In response to this comment, the EPA consulted with vendors of CDPF, who indicated that the installation and maintenance costs for the systems are not as high as the estimates provided by the State of Alaska.<sup>2</sup>

The EPA recognizes that the blending of used oil into diesel fuel is a concern for engines equipped with CDPF;

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<sup>2</sup> See memorandum titled "Summary of Calls with Vendors of Diesel Particulate Filters (DPF)" in docket EPA-HQ-OAR-2010-0295.

This document is a prepublication version, signed by EPA Administrator, Lisa P. Jackson on 06/08/2011. We have taken steps to ensure the accuracy of this version, but it is not the official version.

however, the EPA believes that given the restrictions in the rule for used oil blending (no more than 1.75 percent of total fuel and no more than 200 ppm sulfur in the oil), the increase in sulfur caused by the blending should not be a significant concern for the operation of CDPF-equipped engines.

D. Emission Standards for Marine Engines

Comment: Several commenters provided recommendations on how to treat stationary engines used in marine offshore settings. The commenters said that marine engines should not be subject to land-based standards and indicated support for revisions to allow the use of marine based standards as opposed to NSPS for offshore platform installations. The commenters indicated that these engines are normally nonroad engines that are subject to marine engine standards. The commenters said that if the marine engine is used in a stationary manner, the commenters were supportive of language being added to indicate that stationary engines in marine offshore settings may comply with applicable marine engine standards as opposed to the land-based standards.

Response: The EPA requested comment on the need for stationary engines in marine offshore settings to use engines meeting the marine engine standards, rather than land-based engine standards. Based on comments received on this issue, the

EPA agrees that it would be appropriate to allow stationary engines used in marine offshore settings to meet marine engine standards. The EPA understands that engines used in these settings are generally certified to marine standards and that it may not be possible to know how an engine will be used throughout its life when it is first used. The EPA does not see a need to require engines utilized in the same marine offshore setting to be certified to different standards based solely on the time an engine remains in one location. It therefore is appropriate to require engines used in both mobile and stationary marine offshore applications to be able to meet the same standard.

#### E. Test Methods

Comment: One commenter said that the test method for stationary engines with a displacement at or above 30 l/cyl needs to be changed from Method 5 to Method 5B or Method 17. The main reason the commenter believes Method 5 is not suitable is because it requires the use of glass fiber filters maintained at 120 degrees Celsius ( $^{\circ}\text{C}$ ) [250 degrees Fahrenheit ( $^{\circ}\text{F}$ )]. The method also requires that in sources that have sulfur dioxide ( $\text{SO}_2$ ) or sulfur trioxide ( $\text{SO}_3$ ) that the filter material be unreactive to these pollutants and International Organization for Standardization (ISO) method 9096 2003 does not recommend

glass fiber filter use where this reaction occurs. The commenter went on to say that the temperature required by Method 5 is generally much lower than normal exhaust temperatures from large displacement engines. This necessitates cooling of the exhaust gas in order to use Method 5, the commenter said, which would lead to the formation of additional condensation particles that would affect the sampling results. The commenter argued that the method would not yield reproducible results and recommended that due to inconsistencies, the EPA should allow alternative methods. The commenter recommended that the EPA raise the PM sampling temperature in Method 5 to a minimum of 160°C, which essentially means changing Method 5 to Method 5B, and also allow stationary engines to use Method 17 as an alternative.

Response: The EPA disagrees with the comment that EPA Method 5 does not provide accurate and precise measurements of PM. The statements in EPA Method 5 and ISO 9096 2003 regarding the selection of filtration media that are unreactive to SO<sub>3</sub> are intended to ensure that the proper filter media are used. When acceptable filter media are selected, including glass fiber filters that are unreactive to SO<sub>2</sub> or SO<sub>3</sub>, EPA Method 5 has been shown to provide reproducible results irrespective of the filtration temperature chosen.

The EPA also disagrees that EPA Method 5 cannot achieve a

filtration temperature of 120°C (250°F) since there are no procedures for cooling the sample gas from the stack temperature to the required filtration temperature. EPA Method 5 is silent on the method for cooling the sample gas, as this is left to the discretion of the source test individual. The method employed depends upon the stack gas temperature, the required filtration temperature, and the equipment available to the individual test contractor. In most situations, no special procedures are required since sufficient cooling is achieved by normal air exposure of the probe and filter holder. Where filtration temperature is likely to exceed the method specified temperature, contractors have used specially constructed air cooled or water cooled probes to achieve the proper temperature.

#### F. Definitions

Comment: Several commenters were concerned with the proposed definition of "reconstruct." According to the commenters, the proposed definition would result in stationary engines currently not subject to the rule becoming subject to NSPS after conducting routine maintenance, repair, rework, and overhaul. Several commenters stated that the EPA has not provided sufficient rationale for adding this new definition and the term is significantly different from other NSPS definitions and applicability determinations regarding reconstruction. Two

commenters said that the proposed definition excludes the cost of fundamental components from the fixed capital costs, such as the engineering costs, construction and site installation and startup costs, and the costs associated with auxiliary components that service or that are critical to the engine's operation. Commenters requested that the EPA maintain the definitions in 40 CFR 60.15(b) and 40 CFR 60.15(c), for reconstruction and fixed capital cost, respectively, in the final NSPS for stationary CI and SI engines.

Response: The EPA proposed to add a definition of "reconstruct" to the CI and SI NSPS as an attempt to clarify the meaning of reconstruction. The EPA's objective with the proposal was to provide a more specific definition applicable to stationary engines rather than the broader definition provided in the General Provisions of 40 CFR part 60. The proposed definition was intended to clarify how to conduct the reconstruction analysis by specifically proposing to include a definition that would be applicable to stationary engines subject to NSPS. The EPA believed that providing a specific definition applicable only to stationary engines would be beneficial by bringing clarity to how reconstruction is determined in the stationary engine setting.

The EPA did not expect the proposed change to be

controversial nor did the EPA anticipate that the proposed change would cause such significant concern among affected sources. However, as illustrated in the summary of comments on this issue, several affected stakeholders strongly opposed the EPA's suggested changes to the historical definition of reconstruction. Based on the extensive concerns provided by commenters and subsequent information the EPA has received from stakeholders after the proposal, the EPA determined that it is appropriate to not include the proposed definition of "reconstruct" in the final rule. Instead, the EPA is finalizing the rule using the definition of "reconstruction" from the General Provisions of 40 CFR part 60. Again, the EPA intended to provide more guidance than what was originally provided in the rule on reconstruction; however, it is nearly impossible to capture all potential situations in a definition. The EPA believes it is appropriate to continue to rely on the definition in 40 CFR 60.15. Therefore, the EPA is not finalizing the proposed definition of "reconstruct."

Comment: A number of commenters took issue with the criteria in the proposed definition of the "date of manufacture" and asked that the definition either be removed or revised. Commenters said that the proposed changes to the date of manufacture definition constitute significant concern for

industry because of the cost and operational impacts, plus regulatory confusion the commenters believe the changes create. Commenters indicated that the criteria in the definition are flawed and inconsistent with previous definitions of reconstruction. Several commenters were of the opinion that it is not appropriate to include the removal of the crankshaft as criteria for designating an engine being subject to new standards. This component is frequently removed during inspection and maintenance, according to the commenters, who suggested that the criteria related to the crankshaft be removed entirely. According to the commenters, removal of the crankshaft is sometimes necessary to access components, but this should not constitute replacement. Commenters said that the removal of the serial number from the engine should not necessitate the need to comply with new engine standards. Commenters indicated that the serial number could be inadvertently knocked off during transportation or use, and asked that it also not be included as a criterion in the final rule.

Response: As with the EPA's proposed definition of "reconstruct," the proposal to add a definition for the "date of manufacture" led to a significant concern with affected stakeholders as reflected in this comment summary. Commenters were generally not opposed to having a definition for the "date



of manufacture," but were against some of the criteria used in the proposed definition.

Based on the comments related to removal of the crankshaft, the EPA agrees that including the engine crankshaft language in the definition of "date of manufacture" would not be appropriate. The EPA does not wish to trigger more stringent standards for engines that are simply undergoing regular maintenance. Notably, solely removing the engine crankshaft is not an indication that a substantial amount of work has been conducted on the engine to the extent that it should have to meet to more stringent emission standards. Consequently, the EPA is not including the crankshaft criteria in the definition of "date of manufacture" in the final rule.

Regarding comments opposing the inclusion of the serial number in the definition of "date of manufacture," the EPA agrees that it would be appropriate to exclude that specific criterion in the final rule. The EPA does not wish to require more stringent standards for reconstructed engines solely due to the possibility that in some cases, the serial number might not be available, for instance, it may have been knocked off during transportation, use or maintenance, or if the engine was acquired and it did not have a tag. The EPA is not interested in penalizing affected sources, where information simply is not

available or missing based on a technicality, by subjecting them to more stringent standards. Importantly, the lack of the engine serial number is not an indicator that the engine has undergone significant modification to the point where it should be subject to more stringent standards. Therefore, in the final rule, the EPA has not included the serial number criteria in the definition of "date of manufacture."

The EPA believes that finalizing a cost threshold of 75 percent of the cost of a new facility in the definition of "date of manufacture" is appropriate. Based on the comments received, it appears that the majority of the issues surrounding the date of manufacture concept were related to the crankshaft being included in the definition. Since the EPA is not including the engine crankshaft as a determining factor for assigning an engine a new date of manufacture, the EPA believes that most of the issues brought up by commenters would be resolved.

Comment: One commenter thought that the definition of "installed" in sections 60.4248 and 60.4219 of the proposed NSPS amendments should be modified. The commenter indicated that part of the definition is appropriate, i.e., in terms of having the engine "placed and secured at a location where it is intended to operate" for defining "installed." However, the commenter did not agree with the rest of the definition as that states ". . .

the piping and wiring for exhaust, fuel, controls, etc., is installed and all connections are made; and the engine is capable of being started." The commenter recommended that the final definition read as follows: "Installed means the engine is placed and secured at the location where it is intended to be operated." According to the commenter, because stationary engines are often part of a larger facility, the engines may be placed at the location in advance of completing the rest of the facility and this could be significantly prior to utilities being completed (including local permits and building inspections). In the commenter's opinion, creating the foundation and placing the engine at the location indicates major commitment by the owner, and the commenter did not believe that it is necessary to finalize the remaining connections in order to demonstrate the owner's intent, and such connections are typically more related to the larger construction project than the engine itself.

Response: The EPA agrees with the commenter's recommendations regarding the definition of "installed." The EPA agrees that installation should be defined as the engine has been placed and secured where it is intended to be operated, and that the engine does not have to be capable of being started before it can be considered installed, since the final piping

and wiring may not be completed until well after the engine is secured in its permanent location.

## **VI. Summary of Environmental, Energy and Economic Impacts**

### **A. What are the air quality impacts?**

The final rule would reduce NO<sub>x</sub> emissions from stationary CI ICE with a displacement between 10 and 30 l/cyl by an estimated 300 tons per year (tpy), PM emissions by about 8 tpy, and HC emissions by about 4 tpy, in the year 2018. The EPA estimated emissions reductions for the year 2018 because the year 2018 is the first year the emission standards would be fully implemented for stationary CI engines between 10 and 30 l/cyl. In the year 2030, the final rule would reduce NO<sub>x</sub> emissions from stationary CI ICE between 10 and 30 l/cyl by an estimated 1,100 tpy, PM emissions by about 38 tpy, and HC emissions by about 18 tpy. Emissions reductions were estimated for the year 2030 to provide an estimate of what the reductions would be once there has been substantial turnover in the engine fleet. The EPA expects very few stationary CI ICE with a displacement of 30 l/cyl or more to be installed per year, and no emissions reductions have been estimated for these engines.

### **B. What are the cost impacts?**

The total costs of the final rule are based on the cost associated with purchasing and installing controls on non-

emergency stationary CI ICE with a displacement between 10 and 30 l/cyl. The costs of aftertreatment were based on information developed for CI marine engines. Further information on how the EPA estimated the total costs of the final rule can be found in a memorandum included in the docket (Docket ID. No. EPA-HQ-OAR-2010-0295).

The total national capital cost for the final rule is estimated to be approximately \$236,000 in the year 2018, with a total national annual cost of \$142,000 in the year 2018. The year 2018 is the first year the emission standards would be fully implemented for stationary CI engines between 10 and 30 l/cyl. The total national capital cost for the final rule in the year 2030 is \$235,000, with a total national annual cost of \$711,000. All of these costs are in 2009 dollars.

C. What are the economic impacts?

The EPA expects that there will be less than a 0.001 percent increase in price and a similar decrease in product demand associated with this final rule for producers and consumers in 2018. For more information, please refer to the economic impact analysis for this rulemaking in the docket.

D. What are the non-air health, environmental and energy impacts?

The EPA does not anticipate any significant non-air health,

environmental or energy impacts as a result of this final rule.

## **VII. Statutory and Executive Order Reviews**

### **A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review**

This action is not a "significant regulatory action" under the terms of Executive Order 12866 (58 FR 51735, October 4, 1993) and is therefore not subject to review under Executive Orders 12866 and 13563 (76 FR 3821, January 21, 2011).

### **B. Paperwork Reduction Act**

This action does not impose any new information collection burden. This action does not impose an information collection burden because the Agency is not requiring any additional recordkeeping, reporting, notification or other requirements in this final rule. The changes being finalized in this action do not affect information collection, but include revisions to emission standards and other minor issues. However, the Office of Management and Budget (OMB) has previously approved the information collection requirements contained in the existing regulations (40 CFR part 60 subpart A) under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. and has assigned OMB control number 2060-0590. The OMB control numbers for the EPA's regulations in 40 CFR are listed in 40 CFR part 9.

### C. Regulatory Flexibility Act

The Regulatory Flexibility Act generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of this final rule on small entities, small entity is defined as: (1) A small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

For the electric power generation industry (NAICS 2211), the small business size standard is an ultimate parent entity defined as having a total electric output of 4 million megawatt-hours in the previous fiscal year. The specific SBA size standard is identified for each affected industry within the

Economic Impact Analysis for the final rule. In this case, the EPA presumes the affected engines will all be located in the electric power generation industry.

After considering the economic impacts of this final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities (SISNOSE). The EPA estimates that only three firms are expected to incur costs associated with this final rule, and only one of these firms is a small entity. This small entity is expected to have annualized costs that are less than 0.001 percent of its sales. Hence, the EPA concludes that there is no SISNOSE for this rule.

Although this final rule will not have a significant economic impacts on a substantial number of small entities, EPA nonetheless has tried to reduce the impact of this rule on small entities. When developing the revised standards, EPA conducted several meetings with industry trade associations to discuss regulatory options and the corresponding burden on industry, such as recordkeeping and reporting. The final rule requires the minimum level of testing, monitoring, recordkeeping, and reporting to affected stationary ICE sources necessary to ensure compliance. For more information on the small entity impacts associated with the final rule, please refer to the Economic



Impact Analysis in the public docket at <http://www.regulations.gov> (Docket ID No. EPA-HQ-OAR-2010-0295).

D. Unfunded Mandates Reform Act of 1995

This rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any 1 year. Only minimal changes are being finalized by the Agency in this action and where compliance costs are incurred, only a nominal number of stationary CI engines will experience a compliance cost expense. Thus, this rule is not subject to the requirements of sections 202 or 205 of the Unfunded Mandates Reform Act (UMRA).

This rule is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. The changes being finalized in this action by the Agency are minimal and mostly affect stationary CI engine manufacturers and will not affect small governments.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the

various levels of government, as specified in Executive Order 13132. This action primarily affects private industry, and does not impose significant economic costs on State or local governments. Thus, Executive Order 13132 does not apply to this action.

F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This final rule does not have tribal implications, as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). It will not have substantial direct effects on tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes, as specified in Executive Order 13175. Thus, Executive Order 13175 does not apply to this final rule.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

The EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5-501 of the Executive Order has the potential to influence the regulation. This action is not subject to Executive Order 13045 because it is based solely on

technology performance.

H. Executive Order 13211: Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211 (66 FR 28355, May 22, 2001), because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law No. 104-113, 12(d) (15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs the EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This action does not involve technical standards. Therefore, the EPA did not consider the use of any voluntary consensus standards.

J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income

## Populations

Executive Order 12898 (59 FR 7629, February 16, 1994) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

The EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it does not affect the level of protection provided to human health or the environment. The changes the Agency is finalizing in this action will reduce emissions from certain stationary CI engines, which were previously not controlled as stringently as now. Other changes the Agency is finalizing have minimal effect on emissions.

## K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect,

the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing this final rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of this final rule in the Federal Register. A major rule cannot take effect until 60 days after it is published in the Federal Register. This action is a "major rule" as defined by 5 U.S.C. 804(2). This final rule will be effective on [INSERT DATE 60 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER].

**List of Subjects**

40 CFR Part 60

Administrative practice and procedure, Air pollution control, Intergovernmental relations, Particulate matter, Reporting and recordkeeping.

40 CFR Part 1039

Administrative practice and procedure, Air pollution control.

40 CFR Part 1042

Administrative practice and procedure, Air pollution control.

40 CFR Part 1065

Administrative practice and procedure, Air pollution control, Reporting and recordkeeping requirements, Research.

40 CFR Part 1068

Administrative practice and procedure, Air pollution control, Imports, Motor vehicle pollution, Penalties, Reporting and recordkeeping requirements, Warranties.

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Dated:

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Lisa P. Jackson,  
Administrator.

For the reasons stated in the preamble, title 40, chapter I, of the Code of Federal Regulations is amended to read as follows:

**Part 60--[AMENDED]**

1. The authority citation for part 60 continues to read as follows:

Authority: 42 U.S.C. 7401, et seq.

**Subpart IIII--[AMENDED]**

2. Section 60.4200 is amended by revising paragraph (a) and adding paragraph (e) to read as follows:

§60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in paragraphs (a)(1) through (4) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines;

(ii) The model year listed in Table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are:

(i) Manufactured after April 1, 2006, and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.

(4) The provisions of §60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.

\* \* \* \* \*

(e) Owners and operators of facilities with CI ICE that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

3. Section 60.4201 is amended by revising paragraph (d) and



adding paragraphs (e) through (g) to read as follows:

§60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

\* \* \* \* \*

(d) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(3) Their 2013 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(e) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards and other requirements for

new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.110, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(f) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary non-emergency CI ICE identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 1 to 40 CFR 1042.1 identifies 40 CFR part 1042 as being applicable, 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Areas of Alaska not accessible by the Federal Aid Highway System (FAHS); and

(2) Marine offshore installations.

(g) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion

engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this section that are applicable to the model year, maximum engine power, and displacement of the reconstructed stationary CI ICE.

4. Section 60.4202 is amended by removing and reserving paragraph (c) and adding paragraphs (e) through (h) to read as follows:

§60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

\* \* \* \* \*

(c) [RESERVED]

\* \* \* \* \*

(e) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder;

(3) Their 2013 model year emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder; and

(4) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(f) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE to the certification emission standards and other requirements applicable to Tier 3 new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later emergency stationary

CI ICE with a maximum engine power less than 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(g) Notwithstanding the requirements in paragraphs (a) through (d) of this section, stationary emergency CI internal combustion engines identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 2 to 40 CFR 1042.101 identifies Tier 3 standards as being applicable, the requirements applicable to Tier 3 engines in 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

- (1) Areas of Alaska not accessible by the FAHS; and
- (2) Marine offshore installations.

(h) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (f) of this section that are applicable to the model year, maximum engine power and displacement of the reconstructed emergency stationary CI ICE.

5. Section 60.4203 is revised to read as follows:

§60.4203 How long must my engines meet the emission standards

if I am a manufacturer of stationary CI internal combustion engines?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§60.4201 and 60.4202 during the certified emissions life of the engines.

6. Section 60.4204 is amended by revising paragraph (c) and adding paragraphs (d) and (e) to read as follows:

§60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

\* \* \* \* \*

(c) Owners and operators of non-emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the following requirements:

(1) For engines installed prior to January 1, 2012, limit the emissions of NO<sub>x</sub> in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 grams per kilowatt-hour (g/KW-hr) (12.7 grams per horsepower-hr (g/HP-hr)) when maximum engine speed is less than 130 revolutions per minute (rpm);

(ii)  $45 \cdot n^{-0.2}$  g/KW-hr ( $34 \cdot n^{-0.2}$  g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012 and before January 1, 2016, limit the emissions of NO<sub>x</sub> in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii)  $44 \cdot n^{-0.23}$  g/KW-hr ( $33 \cdot n^{-0.23}$  g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) For engines installed on or after January 1, 2016, limit the emissions of NO<sub>x</sub> in the stationary CI internal combustion engine exhaust to the following:

(i) 3.4 g/KW-hr (2.5 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii)  $9.0 \cdot n^{-0.20}$  g/KW-hr ( $6.7 \cdot n^{-0.20}$  g/HP-hr) where n (maximum engine speed) is 130 or more but less than 2,000 rpm; and

(iii) 2.0 g/KW-hr (1.5 g/HP-hr) where maximum engine speed is greater than or equal to 2,000 rpm.

(4) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

(d) Owners and operators of non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the not-to-exceed (NTE) standards as indicated in §60.4212.

(e) Owners and operators of any modified or reconstructed non-emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed non-emergency stationary CI ICE that are specified in paragraphs (a) through (d) of this section.

7. Section 60.4205 is amended by revising paragraphs (a) and (d) and adding paragraphs (e) and (f) to read as follows:

§60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal



combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in Table 1 to this subpart. Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

\* \* \* \* \*

(d) Owners and operators of emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in this section.

(1) For engines installed prior to January 1, 2012, limit the emissions of NO<sub>x</sub> in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii)  $45 \cdot n^{-0.2}$  g/KW-hr ( $34 \cdot n^{-0.2}$  g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/kW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NO<sub>x</sub> in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii)  $44 \cdot n^{-0.23}$  g/KW-hr ( $33 \cdot n^{-0.23}$  g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

(e) Owners and operators of emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the NTE standards as indicated in §60.4212.

(f) Owners and operators of any modified or reconstructed emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed

CI ICE that are specified in paragraphs (a) through (e) of this section.

8. Section 60.4206 is revised to read as follows:

§60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 over the entire life of the engine.

9. Section 60.4207 is amended by revising paragraph (b), removing and reserving paragraph (c), and revising paragraph (d) to read as follows:

§60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

\* \* \* \* \*

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must purchase diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.

(c) [RESERVED]

(d) Beginning June 1, 2012, owners and operators of

stationary CI ICE subject to this subpart with a displacement of greater than or equal to 30 liters per cylinder are no longer subject to the requirements of paragraph (a) of this section, and must use fuel that meets a maximum per-gallon sulfur content of 1,000 parts per million (ppm).

\* \* \* \* \*

10. Section 60.4208 is amended by revising the section heading, revising paragraphs (g) and (h), and adding paragraph (i) to read as follows:

§60.4208 What is the deadline for importing or installing stationary CI ICE produced in previous model years?

\* \* \* \* \*

(g) After December 31, 2018, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power greater than or equal to 600 KW (804 HP) and less than 2,000 KW (2,680 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that do not meet the applicable requirements for 2017 model year non-emergency engines.

(h) In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements

specified in paragraphs (a) through (g) of this section after the dates specified in paragraphs (a) through (g) of this section.

(i) The requirements of this section do not apply to owners or operators of stationary CI ICE that have been modified, reconstructed, and do not apply to engines that were removed from one existing location and reinstalled at a new location.

11. Section 60.4209 is amended by revising paragraph (a) to read as follows:

§60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

\* \* \* \* \*

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.

\* \* \* \* \*

12. Section 60.4210 is amended by:

- (a) Revising paragraph (b);
- (b) Revising paragraph (c) introductory text;
- (c) Revising paragraph (c)(3)(i);
- (d) Revising paragraph (c)(3)(ii); and

(e) Revising paragraph (d) to read as follows:

\$60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?

\* \* \* \* \*

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified in \$60.4201(d) and (e) and \$60.4202(e) and (f) using the certification procedures required in 40 CFR part 94, subpart C, or 40 CFR part 1042, subpart C, as applicable, and must test their engines as specified in 40 CFR part 94 or 1042, as applicable.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 1039.125, 1039.130, and 1039.135, and 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1039. Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of 40 CFR part 89, 40 CFR part 94 or 40 CFR part 1042 for engines that would be covered by that part if they were nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as appropriate.

Stationary CI internal combustion engine manufacturers must label their engines according to paragraphs (c)(1) through (3) of this section.

\* \* \* \* \*

(3) \* \* \*

(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate.

(ii) Stationary CI internal combustion engines that meet the requirements of this subpart, but are not certified to the standards applicable to nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate, but the words "stationary" must be included instead of "nonroad" or "marine" on the label. In addition, such engines must be labeled according to 40 CFR 1039.20.

\* \* \* \* \*

(d) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under 40 CFR parts 89, 94, 1039 or 1042 for that model year may certify any such family that contains both

nonroad (including marine) and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts.

13. Section 60.4211 is amended:

- (a) By revising paragraph (a);
- (b) By revising the second sentence in paragraph (c);
- (c) By redesignating paragraph (e) as paragraph (f);
- (d) By adding a new paragraph (e);
- (e) By revising newly redesignated paragraph (f); and
- (f) By adding paragraph (g) to read as follows:

§60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under paragraph (g) of this section:

(1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

(2) Change only those emission-related settings that are permitted by the manufacturer; and

(3) Meet the requirements of 40 CFR parts 89, 94 and/or



1068, as they apply to you.

\* \* \* \* \*

(c) \* \* \* The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section.

\* \* \* \* \*

(e) If you are an owner or operator of a modified or reconstructed stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(e) or §60.4205(f), you must demonstrate compliance according to one of the methods specified in paragraphs (e)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in §60.4204(e) or §60.4205(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in §60.4212 or §60.4213, as appropriate. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

(f) Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided

that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. Emergency stationary ICE may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply non-emergency power as part of a financial arrangement with another entity. For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited.

(g) If you do not install, configure, operate, and

maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

(1) If you are an owner or operator of a stationary CI internal combustion engine with maximum engine power less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.

(2) If you are an owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for

minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.

(3) If you are an owner or operator of a stationary CI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to

demonstrate compliance with the applicable emission standards.

14. Section 60.4212 is amended by revising the introductory text and paragraph (a) and adding paragraph (e) to read as follows:

§60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (e) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F, for stationary CI ICE with a displacement of less than 10 liters per cylinder, and according to 40 CFR part 1042, subpart F, for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

\* \* \* \* \*

(e) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1042 must not exceed the NTE standards for the same model year and maximum engine power as required in 40 CFR 1042.101(c).

15. Section 60.4213 is amended by revising the introductory text to read as follows:

§60.4213 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must conduct performance tests according to paragraphs (a) through (f) of this section.

\* \* \* \* \*

16. Section 60.4215 is amended by revising paragraph (a) and adding paragraph (c) to read as follows:

§60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

(a) Stationary CI ICE with a displacement of less than 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §§60.4202 and 60.4205.

\* \* \* \* \*

(c) Stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder that are used in Guam,

American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the following emission standards:

(1) For engines installed prior to January 1, 2012, limit the emissions of NO<sub>x</sub> in the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii)  $45 \cdot n^{-0.2}$  g/KW-hr ( $34 \cdot n^{-0.2}$  g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NO<sub>x</sub> in the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii)  $44 \cdot n^{-0.23}$  g/KW-hr ( $33 \cdot n^{-0.23}$  g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

17. Section 60.4216 is amended by revising paragraphs (a) and (b) and adding paragraphs (c) through (f) to read as follows:

§60.4216 What requirements must I meet for engines used in Alaska?

(a) Prior to December 1, 2010, owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder located in areas of Alaska not accessible by the FAHS should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.

(b) Except as indicated in paragraph (c) of this section, manufacturers, owners and operators of stationary CI ICE with a displacement of less than 10 liters per cylinder located in areas of Alaska not accessible by the FAHS may meet the requirements of this subpart by manufacturing and installing engines meeting the requirements of 40 CFR parts 94 or 1042, as appropriate, rather than the otherwise applicable requirements of 40 CFR parts 89 and 1039, as indicated in sections §§60.4201(f) and 60.4202(g) of this subpart.

(c) Manufacturers, owners and operators of stationary CI



ICE that are located in areas of Alaska not accessible by the FAHS may choose to meet the applicable emission standards for emergency engines in §60.4202 and §60.4205, and not those for non-emergency engines in §60.4201 and §60.4204, except that for 2014 model year and later non-emergency CI ICE, the owner or operator of any such engine that was not certified as meeting Tier 4 PM standards, must meet the applicable requirements for PM in §60.4201 and §60.4204 or install a PM emission control device that achieves PM emission reductions of 85 percent, or 60 percent for engines with a displacement of greater than or equal to 30 liters per cylinder, compared to engine-out emissions.

(d) The provisions of §60.4207 do not apply to owners and operators of pre-2014 model year stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS.

(e) The provisions of §60.4208(a) do not apply to owners and operators of stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS until after December 31, 2009.

(f) The provisions of this section and §60.4207 do not prevent owners and operators of stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS from using fuels mixed with used lubricating oil, in

volumes of up to 1.75 percent of the total fuel. The sulfur content of the used lubricating oil must be less than 200 parts per million. The used lubricating oil must meet the on-specification levels and properties for used oil in 40 CFR 279.11.

18. Section 60.4217 is revised to read as follows:

§60.4217 What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?

Owners and operators of stationary CI ICE that do not use diesel fuel may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in §60.4204 or §60.4205 using such fuels and that use of such fuel is appropriate and reasonably necessary, considering cost, energy, technical feasibility, human health and environmental, and other factors, for the operation of the engine.

19. Section 60.4219 is amended by:

- (a) Adding definitions of "Certified emissions life" and "Date of manufacture" in alphabetical order;
- (b) Adding a definition of "Freshly manufactured engine"

in alphabetical order;

(c) Adding a definition of "Installed" in alphabetical order;

(d) Revising the definition of "Model year";

(e) Revising the definition of "Stationary internal combustion engine"; and

(f) Removing the definition of "Useful life" to read as follows.

\$60.4219 What definitions apply to this subpart?

\* \* \* \* \*

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for certified emissions life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

\* \* \* \* \*

Date of manufacture means one of the following things:

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(1) For freshly manufactured engines and modified engines, date of manufacture means the date the engine is originally produced.

(2) For reconstructed engines, date of manufacture means the date the engine was originally produced, except as specified in paragraph (3) of this definition.

(3) Reconstructed engines are assigned a new date of manufacture if the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable entirely new facility. An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine is produced using all new components except for the engine block. In these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced.

\* \* \* \* \*

Freshly manufactured engine means an engine that has not been placed into service. An engine becomes freshly manufactured when it is originally produced.

\* \* \* \* \*

Installed means the engine is placed and secured at the location where it is intended to be operated.

\* \* \* \* \*

Model year means the calendar year in which an engine is manufactured (see "date of manufacture"), except as follows:

(1) Model year means the annual new model production period of the engine manufacturer in which an engine is manufactured (see "date of manufacture"), if the annual new model production period is different than the calendar year and includes January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year.

(2) For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was manufactured (see "date of manufacture").

\* \* \* \* \*

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is

not used to propel a motor vehicle, aircraft, or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

\* \* \* \* \*

20. Table 3 to Subpart IIII of Part 60 is revised to read as follows:

**Table 3 to Subpart IIII of Part 60 -- Certification Requirements for Stationary Fire Pump Engines**

As stated in §60.4202(d), you must certify new stationary fire pump engines beginning with the following model years:

Engine Power	Starting Model Year Engine Manufacturers Must Certify New Stationary Fire Pump Engines according to §60.4202(d) <sup>1</sup>
KW<75 (HP<100)	2011
75≤KW<130 (100≤HP<175)	2010
130≤KW≤560 (175≤HP≤750)	2009
KW>560 (HP>750)	2008

<sup>1</sup>Manufacturers of fire pump stationary CI ICE with a maximum engine power greater than or equal to 37 kW (50 HP) and less than 450 kW (600 HP) and a rated speed of greater than 2,650 revolutions per minute (rpm) are not required to certify such engines until three model years following the model year indicated in this Table 3 for engines in the applicable engine power category.

**Subpart JJJJ--[AMENDED]**

21. Section 60.4230 is amended by revising paragraphs (a) introductory text and (a) (5) and adding paragraph (a) (6) to read as follows:

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§60.4230 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (6) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

\* \* \* \* \*

(5) Owners and operators of stationary SI ICE that are modified or reconstructed after June 12, 2006, and any person that modifies or reconstructs any stationary SI ICE after June 12, 2006.

(6) The provisions of §60.4236 of this subpart are applicable to all owners and operators of stationary SI ICE that commence construction after June 12, 2006.

\* \* \* \* \*

22. Section 60.4231 is amended by revising paragraph (a) and adding paragraph (g) to read as follows:

§60.4231 What emissions standards must I meet if I am a manufacturer of stationary SI internal combustion engines or equipment containing such engines?

(a) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power

less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008 to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as follows:

<b>If engine displacement is...</b>	<b>and manufacturing dates are...</b>	<b>the engine must meet emission standards and related requirements for nonhandheld engines under...</b>
(1) below 225 cc	July 1, 2008 to December 31, 2011	40 CFR part 90.
(2) below 225 cc	January 1, 2012 or later	40 CFR part 1054.
(3) at or above 225 cc	July 1, 2008 to December 31, 2010	40 CFR part 90.
(4) at or above 225 cc	January 1, 2011 or later	40 CFR part 1054.

(g) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary SI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this section that are applicable to the model year, maximum engine power and displacement of the reconstructed stationary SI ICE.

23. Section 60.4233 is amended by revising paragraph (f) to read as follows:

§60.4233 What emission standards must I meet if I am an owner

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or operator of a stationary SI internal combustion engine?

\* \* \* \* \*

(f) Owners and operators of any modified or reconstructed stationary SI ICE subject to this subpart must meet the requirements as specified in paragraphs (f)(1) through (5) of this section.

(1) Owners and operators of stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with emission standards in §60.4231(a) for their stationary SI ICE. Engines with a date of manufacture prior to July 1, 2008 must comply with the emission standards specified in §60.4231(a) applicable to engines manufactured on July 1, 2008.

(2) Owners and operators of stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) that are gasoline engines and are modified or reconstructed after June 12, 2006, must comply with the emission standards in §60.4231(b) for their stationary SI ICE. Engines with a date of manufacture prior to July 1, 2008 (or January 1, 2009 for emergency engines) must comply with the emission standards specified in §60.4231(b) applicable to engines manufactured on July 1, 2008 (or January 1, 2009 for emergency engines).

(3) Owners and operators of stationary SI ICE with a

maximum engine power greater than 19 KW (25 HP) that are rich burn engines that use LPG, that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in §60.4231(c). Engines with a date of manufacture prior to July 1, 2008 (or January 1, 2009 for emergency engines) must comply with the emission standards specified in §60.4231(c) applicable to engines manufactured on July 1, 2008 (or January 1, 2009 for emergency engines).

(4) Owners and operators of stationary SI natural gas and lean burn LPG engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (d) or (e) of this section, except that such owners and operators of non-emergency engines and emergency engines greater than or equal to 130 HP must meet a nitrogen oxides (NO<sub>x</sub>) emission standard of 3.0 grams per HP-hour (g/HP-hr), a CO emission standard of 4.0 g/HP-hr (5.0 g/HP-hr for non-emergency engines less than 100 HP), and a volatile organic compounds (VOC) emission standard of 1.0 g/HP-hr, or a NO<sub>x</sub> emission standard of 250 ppmvd at 15 percent oxygen (O<sub>2</sub>), a CO emission standard 540 ppmvd at 15 percent O<sub>2</sub> (675 ppmvd at 15 percent O<sub>2</sub> for non-emergency engines less than 100 HP), and a VOC emission standard of 86 ppmvd at 15 percent O<sub>2</sub>, where the date of

manufacture of the engine is:

(i) Prior to July 1, 2007, for non-emergency engines with a maximum engine power greater than or equal to 500 HP (except lean burn natural gas engines and LPG engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);

(ii) Prior to July 1, 2008, for non-emergency engines with a maximum engine power less than 500 HP;

(iii) Prior to January 1, 2009, for emergency engines;

(iv) Prior to January 1, 2008, for non-emergency lean burn natural gas engines and LPG engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP.

(5) Owners and operators of stationary SI landfill/digester gas ICE engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (e) of this section for stationary landfill/digester gas engines. Engines with maximum engine power less than 500 HP and a date of manufacture prior to July 1, 2008 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE with a maximum engine power less than 500 HP manufactured on July 1, 2008. Engines with a maximum

engine power greater than or equal to 500 HP (except lean burn engines greater than or equal to 500 HP and less than 1,350 HP) and a date of manufacture prior to July 1, 2007 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE with a maximum engine power greater than or equal to 500 HP (except lean burn engines greater than or equal to 500 HP and less than 1,350 HP) manufactured on July 1, 2007. Lean burn engines greater than or equal to 500 HP and less than 1,350 HP with a date of manufacture prior to January 1, 2008 must comply with the emission standards specified in paragraph (e) of this section for stationary landfill/digester gas ICE that are lean burn engines greater than or equal to 500 HP and less than 1,350 HP and manufactured on January 1, 2008.

\* \* \* \* \*

24. Section 60.4236 is amended by revising the section heading to read as follows:

§60.4236 What is the deadline for importing or installing stationary SI ICE produced in previous model years?

\* \* \* \* \*

25. Section 60.4241 is amended by revising the first sentence in paragraph (b) to read as follows:

§60.4241 What are my compliance requirements if I am a

manufacturer of stationary SI internal combustion engines  
participating in the voluntary certification program?

\* \* \* \* \*

(b) Manufacturers of engines other than those certified to standards in 40 CFR part 90 or 40 CFR part 1054 must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must follow the same test procedures that apply to large SI nonroad engines under 40 CFR part 1048, but must use the D-1 cycle of International Organization of Standardization 8178-4: 1996(E) (incorporated by reference, see 40 CFR 60.17) or the test cycle requirements specified in Table 3 to 40 CFR 1048.505, except that Table 3 of 40 CFR 1048.505 applies to high load engines only. \* \* \*

\* \* \* \* \*

26. Section 60.4243 is amended by revising paragraph (a) introductory text, revising paragraph (a)(1), and adding paragraph (i) to read as follows:

§60.4243 What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?

(a) If you are an owner or operator of a stationary SI internal combustion engine that is manufactured after July 1, 2008, and must comply with the emission standards specified in

§60.4233(a) through (c), you must comply by purchasing an engine certified to the emission standards in §60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. In addition, you must meet one of the requirements specified in (a)(1) and (2) of this section.

(1) If you operate and maintain the certified stationary SI internal combustion engine and control device according to the manufacturer's emission-related written instructions, you must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required if you are an owner or operator. You must also meet the requirements as specified in 40 CFR part 1068, subparts A through D, as they apply to you. If you adjust engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance.

\* \* \* \* \*

(i) If you are an owner or operator of a modified or reconstructed stationary SI internal combustion engine and must comply with the emission standards specified in §60.4233(f), you must demonstrate compliance according to one of the methods specified in paragraphs (i)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an

engine certified to the emission standards in §60.4233(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in §60.4244. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

27. Section 60.4248 is amended by:

- (a) Revising the definition of "Certified emissions life";
- (b) Adding a definition for "Date of manufacture" in alphabetical order;
- (c) Adding a definition for "Freshly manufactured engine" in alphabetical order;
- (d) Adding a definition for "Installed" in alphabetical order;
- (e) Revising the definition of "Liquefied petroleum gas";
- (f) Revising the definition of "Model year";
- (g) Revising the definition of "Stationary internal combustion engine"; and
- (h) Revising the definition of "Stationary internal combustion engine test cell/stand" to read as follows:

§60.4248 What definitions apply to this subpart?

\* \* \* \* \*

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) are given in 40 CFR 90.105, 40 CFR 1054.107, and 40 CFR 1060.101, as appropriate. The values for certified emissions life for stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) certified to 40 CFR part 1048 are given in 40 CFR 1048.101(g). The certified emissions life for stationary SI ICE with a maximum engine power greater than 75 KW (100 HP) certified under the voluntary manufacturer certification program of this subpart is 5,000 hours or 7 years, whichever comes first. You may request in your application for certification that we approve a shorter certified emissions life for an engine family. We may approve a shorter certified emissions life, in hours of engine operation but not in years, if we determine that these engines will rarely operate longer than the shorter certified emissions life. If engines identical to those in the engine family have already been produced and are in use, your demonstration must include documentation from such in-use engines. In other cases, your demonstration must include



an engineering analysis of information equivalent to such in-use data, such as data from research engines or similar engine models that are already in production. Your demonstration must also include any overhaul interval that you recommend, any mechanical warranty that you offer for the engine or its components, and any relevant customer design specifications. Your demonstration may include any other relevant information. The certified emissions life value may not be shorter than any of the following:

- (i) 1,000 hours of operation.
- (ii) Your recommended overhaul interval.
- (iii) Your mechanical warranty for the engine.

\* \* \* \* \*

Date of manufacture means one of the following things:

(1) For freshly manufactured engines and modified engines, date of manufacture means the date the engine is originally produced.

(2) For reconstructed engines, date of manufacture means the date the engine was originally produced, except as specified in paragraph (3) of this definition.

(3) Reconstructed engines are assigned a new date of manufacture if the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a

comparable entirely new facility. An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine is produced using all new components except for the engine block. In these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced.

\* \* \* \* \*

Freshly manufactured engine means an engine that has not been placed into service. An engine becomes freshly manufactured when it is originally produced.

\* \* \* \* \*

Installed means the engine is placed and secured at the location where it is intended to be operated.

\* \* \* \* \*

Liquefied petroleum gas means any liquefied hydrocarbon gas obtained as a by-product in petroleum refining or natural gas production.

Model year means the calendar year in which an engine is manufactured (see "date of manufacture"), except as follows:

(1) Model year means the annual new model production period of the engine manufacturer in which an engine is manufactured (see "date of manufacture"), if the annual new

model production period is different than the calendar year and includes January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year.

(2) For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was manufactured (see "date of manufacture").

\* \* \* \* \*

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle, aircraft, or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

Stationary internal combustion engine test cell/stand means an engine test cell/stand, as defined in 40 CFR part 63, subpart P, that tests stationary ICE.

\* \* \* \* \*

28. Table 1 to Subpart JJJJ of Part 60 is revised to read as follows:

**Table 1 to Subpart JJJJ of Part 60 -- NO<sub>x</sub>, CO, and VOC Emission Standards for Stationary Non-Emergency SI Engines ≥100 HP (except gasoline and rich burn LPG), Stationary SI Landfill/Digester Gas Engines, and Stationary Emergency Engines >25 HP**

Engine Type and Fuel	Maximum Engine Power	Manufacture Date	Emission Standards <sup>a</sup>					
			g/HP-hr			ppmvd at 15% O <sub>2</sub>		
			NO <sub>x</sub>	CO	VOC <sup>d</sup>	NO <sub>x</sub>	CO	VOC <sup>d</sup>
Non-Emergency SI Natural Gas <sup>b</sup> and Non-Emergency SI Lean Burn LPG <sup>b</sup>	100≤HP<500	7/1/2008	2.0	4.0	1.0	160	540	86
		1/1/2011	1.0	2.0	0.7	82	270	60
Non-Emergency SI Lean Burn Natural Gas and LPG	500≤HP<1,350	1/1/2008	2.0	4.0	1.0	160	540	86
		7/1/2010	1.0	2.0	0.7	82	270	60
Non-Emergency SI Natural Gas	HP≥500	7/1/2007	2.0	4.0	1.0	160	540	86

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and Non- Emergency SI Lean Burn LPG (except lean burn 500≤HP<1,350)	HP≥500	7/1/2010	1.0	2.0	0.7	82	270	60
Landfill/ Digester Gas (except lean burn 500≤HP<1,350)	HP<500	7/1/2008	3.0	5.0	1.0	220	610	80
		1/1/2011	2.0	5.0	1.0	150	610	80
	HP≥500	7/1/2007	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Landfill/ Digester Gas Lean Burn	500≤HP<1,350	1/1/2008	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Emergency	25<HP<130	1/1/2009	10 <sup>c</sup>	387	N/A	N/A	N/A	N/A
	HP≥130		2.0	4.0	1.0	160	540	86

<sup>a</sup> Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O<sub>2</sub>.

<sup>b</sup> Owners and operators of new or reconstructed non-emergency lean burn SI stationary engines with a site rating of greater than or equal to 250 brake HP located at a major source that are meeting the requirements of 40 CFR part 63, subpart ZZZZ, Table 2a do not have to comply with the CO emission standards of Table 1 of this subpart.

<sup>c</sup> The emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of NO<sub>x</sub>+HC.

<sup>d</sup> For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

29. Table 2 to Subpart JJJJ of Part 60 is revised to read as follows:

**Table 2 to Subpart JJJJ of Part 60 -- Requirements for**

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## Performance Tests

As stated in §60.4244, you must comply with the following requirements for performance tests within 10 percent of 100 percent peak (or the highest achievable) load:

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary SI internal combustion engine demonstrating compliance according to §60.4244.	a. limit the concentration of NO <sub>x</sub> in the stationary SI internal combustion engine exhaust	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, Appendix A or ASTM Method D6522-00(2005) <sup>a</sup> .	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O <sub>2</sub> concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B <sup>b</sup> of 40 CFR part 60, appendix A or ASTM Method D6522-00(2005) <sup>a</sup> .	(b) Measurements to determine O <sub>2</sub> concentration must be made at the same time as the measurements for NO <sub>x</sub> concentration.

		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60.	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17).	(c) Measurements to determine moisture must be made at the same time as the measurement for NO <sub>x</sub> concentration.
		v. Measure NO <sub>x</sub> at the exhaust of the stationary internal combustion engine.	(5) Method 7E of 40 CFR part 60, appendix A, Method D6522-00(2005) <sup>a</sup> , Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17).	(d) Results of this test consist of the average of the three 1-hour or longer runs.

	b. limit the concentration of CO in the stationary SI internal combustion engine exhaust	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, Appendix A or ASTM Method D6522-00(2005) <sup>a</sup> .	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O <sub>2</sub> concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B <sup>b</sup> of 40 CFR part 60, appendix A or ASTM Method D6522-00(2005) <sup>a</sup> .	(b) Measurements to determine O <sub>2</sub> concentration must be made at the same time as the measurements for CO concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60.	



		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17).	(c) Measurements to determine moisture must be made at the same time as the measurement for CO concentration.
		v. Measure CO at the exhaust of the stationary internal combustion engine.	(5) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522-00(2005) <sup>a</sup> , Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17).	(d) Results of this test consist of the average of the three 1-hour or longer runs.
	c. limit the concentration of VOC in the stationary SI internal combustion engine exhaust	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, Appendix A.	(a) If using a control device, the sampling site must be located at the outlet of the control device.

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		ii. Determine the O <sub>2</sub> concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B <sup>b</sup> of 40 CFR part 60, appendix A or ASTM Method D6522-00(2005) <sup>a</sup> .	(b) Measurements to determine O <sub>2</sub> concentration must be made at the same time as the measurements for VOC concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 19 of 40 CFR part 60.	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17).	(c) Measurements to determine moisture must be made at the same time as the measurement for VOC concentration.

		v. Measure VOC at the exhaust of the stationary internal combustion engine.	(5) Methods 25A and 18 of 40 CFR part 60, appendix A, Method 25A with the use of a methane cutter as described in 40 CFR 1065.265, Method 18 or 40 CFR part 60, appendix A <sup>c,d</sup> , Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03 (incorporated by reference, see §60.17).	(d) Results of this test consist of the average of the three 1-hour or longer runs.
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**Part 1039 --[AMENDED]**

30. The authority citation for part 1039 continues to read as follows:

Authority: 42 U.S.C. 7401-7671q.

31. Section 1039.20 is amended by revising paragraph (a) introductory text and paragraph (c) to read as follows:

§1039.20 What requirements from this part apply to excluded

stationary engines?

\* \* \* \* \*

(a) You must add a permanent label or tag to each new engine you produce or import that is excluded under §1039.1(c) as a stationary engine and is not required by 40 CFR part 60, subpart IIII, to meet the requirements of this part 1039, or the requirements of 40 CFR parts 89, 94 or 1042, that are equivalent to the requirements applicable to marine or land-based nonroad engines for the same model year. To meet labeling requirements, you must do the following things:

\* \* \* \* \*

(c) Stationary engines required by 40 CFR part 60, subpart IIII, to meet the requirements of this part 1039, or part 89, 94 or 1042, must meet the labeling requirements of 40 CFR 60.4210.

**Part 1042 --[AMENDED]**

32. The authority citation for part 1042 continues to read as follows:

Authority: 42 U.S.C. 7401-7671q.

33. Section 1042.1 is amended by adding paragraph (h) to read as follows:

§1042.1 Applicability

\* \* \* \* \*

(h) Starting with the model years noted in Table 1 of this

section, all of the subparts of this part, except subpart I, apply as specified in 40 CFR part 60, subpart IIII, to freshly manufactured stationary compression-ignition engines subject to the standards of 40 CFR part 60, subpart IIII, that have a per-cylinder displacement at or above 10 liters and below 30 liters per cylinder. Such engines are considered Category 2 engines for purposes of this part 1042.

**Part 1065--[AMENDED]**

34. The authority citation for part 1065 continues to read as follows:

Authority: 42 U.S.C. 7401-7671q.

35. Section 1065.1 is amended by revising paragraphs (a) (3) and (a) (4) to read as follows:

§1065.1 Applicability

(a) \* \* \*

(3) Nonroad diesel engines we regulate under 40 CFR part 1039 and stationary compression-ignition engines that are certified to the standards in 40 CFR part 1039, as specified in 40 CFR part 60, subpart IIII. For earlier model years, manufacturers may use the test procedures in this part or those specified in 40 CFR part 89 according to §1065.10.

(4) Marine diesel engines we regulate under 40 CFR part 1042 and stationary compression-ignition engines that are

certified to the standards in 40 CFR part 1042, as specified in 40 CFR part 60, subpart II. For earlier model years, manufacturers may use the test procedures in this part or those specified in 40 CFR part 94 according to §1065.10.

\* \* \* \* \*

**Part 1068--[AMENDED]**

36. The authority citation for part 1068 continues to read as follows:

Authority: 42 U.S.C. 7401-7671q.

37. Section 1068.1 is amended by revising paragraph (a) (3) to read as follows:

§1068.1 Does this part apply to me?

(a) \* \* \*

(3) Stationary compression-ignition engines certified using the provisions of 40 CFR parts 1039 or 1042, as indicated in 40 CFR part 60, subpart II.

\* \* \* \* \*